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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/575,503	BAR YONA, ITZHAK	
	Examiner	Art Unit	
	ERIC A. RUST	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *11 April 2006* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/22/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-17 are pending in this application.

Priority

2. Acknowledgment is made of Applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy of Application No. 158458, filed on October 16, 2003, in the Israeli Patent Office has been received by the Office.

Information Disclosure Statement

3. The information disclosure statement filed August 22, 2006 fails to comply with 37 CFR 1.98(a)(3), which requires a concise explanation of the relevance, as it is presently understood by the individual designated in § 1.56(c) most knowledgeable about the content of the information, of each patent, publication, or other information listed that is not in the English language, and a copy of the translation if a written English-language translation of a non-English-language document, or portion thereof, is within the possession, custody, or control of, or is readily available to any individual designated in § 1.56(c). The IDS has been placed in the application file, but the information referred to therein, specifically document number JP 4043348, has not been considered.

Specification

4. The disclosure is objected to because of the following informalities:

a. Pg. 14, line 6, it appears that "77/1" is a typographical error and should be replaced with "67/1;" and

b. Pg. 15, line 5, it appears that "77/1" is a typographical error and should be replaced with "77/2."

Appropriate correction is required.

Drawings

5. Figures 1, 2, and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claim 11 is objected to because of the following informalities:

In regard to claim 11, "the pitch distance," recited in line 2, has no antecedent basis.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-2 and 4-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claims 1-2 and 4-5, "linear orientation," recited in lines 6 and 8-9 of claim 1, line 1 of claim 2, lines 1 and 8 of claim 4, and line 10 of claim 5, is not clearly understood rendering the claim indefinite because it does not spell out explicitly the exact function of the claim limitation. For example, it is not clear what linear orientation means in regards to the instant application. For purposes of examination, the Examiner will interpret this recitation to refer to an alignment in respect to the printer.

In further regard to claim 2, "the linear orientation and pitch distance data," recited in lines 1-2 of claim 2, is not clearly understood rendering the claim indefinite because it does not spell out explicitly the exact function of the claim limitation. For example, it is not clear if the recitation "the linear orientation and pitch distance data" is referring to the linear orientation and pitch distance data of the lenticular sheet or the linear orientation and pitch distance data of the digital data. For purposes of

examination, the Examiner will interpret this recitation to refer to the linear orientation and pitch distance data of the lenticular sheet.

In regard to claims 6-10, the claims are rejected for depending upon rejected claim 4, and for not solving the problems in claim 4.

In regard to clam 14, the recitation "the computerized system is capable of importing the original interlaced file to the printer," recited in lines 1 and to of claim 14, is not clearly understood rendering the claim indefinite because it does not spell out explicitly the exact function of the claim limitation. For example, since the a copy of the original data is what is being manipulated, see claim 11 from which claim 14 depends, it is not clear how this original data is being sent to the printer, or why it is being sent. For purposes of examination, the Examiner will interpret this recitation to mean that the modified copy of the original data (i.e., the data stream of the modified copy of the original data) is being sent to the printer.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 1, 2, 4, 6, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,709,080 B2 to Nims et al. (hereinafter, Nims). Nims was cited by Applicant in the IDS filed on August 22, 2006.

In regard to claim 1, Nims discloses a method for obtaining automatic alignment of interlaced images to a lenticular sheet and adaptation between the pitch distance thereof (**Nims, Abstract**), comprising:

a) Obtaining an interlaced file that includes digital data corresponding to linear frames of at least two different images, said digital data comprising linear orientation and pitch distance data (**Nims, col. 6, lines 36-42, and col. 7, line 38, modifying pixel spacing means that the images are interlaced in advance, accordingly, the digital data would comprise linear orientation and pitch distance data**);

b) Providing a lenticular sheet, on the flat face of which said at least two different images are intended to be printed, and obtaining linear orientation and pitch distance thereof (**Nims, col. 7, lines 1-3, 34-39, 52-58, and 62-67, and col. 8, lines 1-2, SPL is used for determining orientation (i.e., an alignment in respect to the printer) of an lenticular sheet**);

c) Modifying the digital data of the interlaced file so that the orientation and pitch distance of said linear frames match the orientation and pitch distance of said lenticular sheet (**Nims, col. 7, lines 34-39, and lines 62-63**); and

d) Printing the modified digital data on said lenticular sheet (**Nims, col. 8, line 2**).

In regard to claim 2, Nims further discloses wherein the linear orientation and pitch distance data is taken relative to a reference position on the lenticular sheet (**Nims, col. 7, lines 1-4, and lines 34-39, and col. 8, lines 2-3, crest of left most lenticule is reference position**).

In regard to claim 4, Nims further discloses wherein obtaining the linear orientation and pitch distance of the lenticular sheet is implemented by utilization of:

(i) guiding line(s) and/or reference mark(s), being part of said lenticular sheet or printed on the flat side of said lenticular sheet (**Nims, col. 7, lines 1-4, and lines 34-39, and col. 8, lines 2-3, crest of left most lenticule is reference position**); and

(ii) an optical system (**Nims, Fig. 1, item 32, 28, and 30**), capable of moving in line(s) that is/are essentially perpendicular to the lenticules of said lenticular sheet, and sensing the relative location of said guiding lines and/or reference marks by scanning said lenticular sheet and deriving said linear orientation and said pitch distance via the scanning results (**Nims, col. 7, lines 5-34, and lines 62-63, sensor scans lenticules to determine MCP spacing**).

In regard to claim 6, Nims further discloses wherein part or all of the lenticules of the lenticular sheet are used as guiding lines, or reference marks, to allow the counting of the lenticules as well as measuring the width of said lenticular sheet, by

moving a corresponding light source over the lenticules, emitting light towards the lenticules and sensing reflected light having different intensities at different locations as a result of reflections from different portions/areas of the lenticules, thereby calculating an average pitch distance of said lenticules, by dividing the overall width of said lenticular sheet by the number of said lenticules (**Nims, col. 7, lines 5-34, and lines 62-63, see also specifically col. 7, lines 16-20, MCP is an inverse of lens-per-inch, which would be a width divided by the number of lenses**).

In regard to claim 10, Nims further discloses wherein the location/position of the lenticular sheet with respect to the printer, and the width of said lenticular sheet is obtained automatically prior to the printing of the interlaced images (**Nims, col. 7, lines 5-34**), comprising:

a) advancing said lenticular sheet to a first measuring position (**Nims, col. 7, lines 5-22**);

b) moving the scanning head of the optical system across the guiding line(s), for obtaining key points that are part of said guiding lines (**Nims, col. 7, lines 5-22, key points is sensor data disclosed in col. 7, line 9**);

c) storing said key points (**Nims, col. 7, lines 5-22, the points would have to be stored, at least temporarily in, for example, a cache memory**);

d) advancing said lenticular sheet to a second measuring position and repeating steps b) and c) (**Nims, col. 7, lines 5-22**); and

e) obtaining the location/position and the width of said lenticular sheet by utilizing the stored key points **(Nims, col. 7, lines 5-22)**.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nims in view of Official Notice.

In regard to claim 3, Nims does not specifically disclose wherein the modifications are made on a digital file that is a copy of the interlaced file, for allowing further utilization of the original interlaced file for additional prints, by avoiding corruption of the original interlaced file.

The Examiner, however, takes Official Notice that making modifications on a digital file that is a copy of an original file, is well known and expected in the art, and it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nims in such a way in order to assure that original data is preserved for future use.

13. Claims 5 and 7-9 are rejected under 35 U.S.C. 103(a) as being obvious in view of Nims.

In regard to claims 5 and 7-9, Nims does not discloses wherein the guiding lines, or reference marks, are the first and the last lenticules of the lenticular sheet and the optical system and lenticular sheet are moved relative to one another for obtaining the "X" and "Y" coordinates of three or more key points, at least two key points residing on said first, or last, lenticule and the other key point(s) on said last, or first, lenticule, by moving a light source over the first and last lenticules, and sensing the difference in the intensity of the light reflected from the vicinity of said first and last lenticules, and the obtained "X" and "Y" coordinates of said key points being used to calculate the linear orientation and pitch distance of said lenticular sheet; or wherein the lenticular sheet contains areas not occupied by lenticules, and wherein the guiding lines, or reference marks, are said areas; or wherein the guiding lines/reference marks are paint marks with distinguishable color(s) applied to preselected portion(s)/area(s) of the lenticular sheet; or wherein the guiding lines/reference marks are lenticules that are characterized by having a higher profile and/or larger width with respect to the other lenticules of the lenticular sheet.

Nims, however, discloses the use of guiding lines being part of the lenticular sheet (**Nims, col. 7, lines 5-34, and lines 62-63**).

Moreover, Applicant has not disclosed any specific advantage or criticality of having guiding lines being such as disclosed in claims 5 and 7-9. As such, the above limitations are a matter of design choice.

Accordingly, it would have been an obvious matter of design choice to modify Nims to include the limitations in any of claims 5 and 7-9, since Applicant has not disclosed that claims 5 and 7-9 solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the guiding lines being the lenticules themselves, as disclosed in Nims, or the guiding lines being as disclosed in any of claims 5 and 7-9.

14. Claims 11-15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nims in view of Official Notice.

In regard to claim 11, Nims discloses a printing system in which alignment of interlaced images to a lenticular sheet and adaptation between the pitch distance thereof are obtained automatically **(Nims, Abstract)**, comprising:

a) A printing means **(Nims, col. 6, line 57, inkjet printer)**, for accepting a lenticular sheet that includes guiding line(s) and/or reference mark(s) as part of said lenticular sheet or printed on the flat side of said lenticular sheet, and for printing the interlaced images on said lenticular sheet **(Nims, col. 7, lines 5-34, and lines 62-63)**;

b) An optical scanner **(Nims, Fig. 1, item 32, 28, and 30)**, capable of relative movement with respect to said lenticular sheet, and of scanning the lenticules of said

lenticular sheet and of sensing light reflected therefrom, thereby obtaining the 'X/Y' coordinates of key points residing on guiding lines, or reference marks, that are part of said lenticular sheet (**Nims, col. 7, lines 5-22, key points is sensor data disclosed in col. 7, line 9**);

c) A computerized system, which includes a software (**Nims, col. 7, lines 45-46, general purpose computer would include software**) for:

calculating the alignment deviation of said lenticular sheet from a known reference location/position and the pitch distance of the lenticular sheet, by utilizing said key points (**Nims, col. 7, lines 1-3, 34-39, 52-58, and 62-67, and col. 8, lines 1-2, SPL is used for determining alignment deviation**);

modifying data of an interlaced file in accordance with the calculated alignment deviation and in accordance with the calculated pitch distance deviation (**Nims, col. 7, lines 34-39, and lines 62-63**); and

printing the modified interlaced file (**Nims, col. 8, line 2**).

Nims does not disclose generating a file that is a copy of the original interlaced file, and modifying the copied file instead of the original.

The Examiner, however, takes Official Notice that making modifications on a digital file that is a copy of an original file, is well known and expected in the art, and it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Nims in such a way in order to assure that original data is preserved for future use.

In regard to claim 12, the claim is rejected in the same way as claim 11 above. Moreover, Nims discloses wherein the computerized system is embedded, coupled to, incorporated or integrated into the printing means (**Nims, col. 6, lines 40-41, the general purpose computer would be coupled to the printing means**).

In regard to claim 13, the claim is rejected in the same way as claim 11 above. Moreover, Nims discloses wherein the computerized system is a "stand-alone" system, which is external to the printing means and functionally connected thereto (**Nims, col. 5, line 11, and col. 6, lines 40-41, Nims discloses a inkjet printer and a general purpose computer, the Examiner interprets this as meaning the computerized system is a "stand-alone" system, which is external to the printing means and functionally connected thereto**).

In regard to claim 14, the claim is rejected in the same way as claim 11 above. Moreover, Nims discloses wherein the computerized system is capable of importing the original interlaced file to the printer (**Nims, col. 5, lines 7-24, and col. 6, lines 36-42, the general purpose computer modifies the data and the inkjet printer prints the modified data, accordingly, the computerized system is capable of importing the interlaced file to the printer (i.e., sending the print data stream to the printer)**).

In regard to claim 15, the claim is rejected in the same way as claim 11 above. Moreover, Nims discloses wherein the computerized system is capable of generating the original interlaced file (**Nims, col. 6, lines 36-42**).

In regard to claim 17, the claim is rejected in the same way as claim 11 above. Moreover, Nims discloses wherein the optical system is originally embedded, coupled to, incorporated or integrated into the printing means, or is an 'add-on' device (**Nims, Fig. 1, the optical system discloses in Fig. 1 has to be either originally embedded, coupled to, incorporated or integrated into the printing means, or is an 'add-on' device**).

15. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nims in view of Official Notice, and further in view of U.S. Patent No. 6,480,219 B1 to Uejima et al. (hereinafter, Uejima).

In regard to claim 16, the claim is rejected in the same way as claim 11 above. Nims, however, does not disclose wherein the optical scanner is stationary with respect to the lenticular sheet, said optical scanner including a matrix of light sources and a matrix of light sensors, the operation of which replaces the relative movement between said optical scanner and said lenticular sheet, said light sources emitting light in synchronization with respect to one another, for emitting a single beam that moves over several of the lenticules of the lenticular sheet, said moving beam causing

corresponding reflection of light from the lenticules of lenticular sheet, which is sensed by said matrix of light sensors, thereby obtaining the key points.

Uejima, however, disclose driving an array (i.e., a matrix) of lights which replaces a relative movement between said optical scanner and a sheet of paper (**Uejima, col. 6, lines 39-55**).

It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Nims with the teachings of Uejima to have an array (i.e., a matrix) of lights to use for scanning, thereby replacing a relative movement between said optical scanner and a sheet of paper as taught by Uejima in order to increase scanning speed (**see Uejima, col. 1, lines 15-19 for a discussion of shortening scanning time using light beams to simultaneously expose a photosensitive material**).

The end result of the combination of Nims and Uejima would be the optical scanner being stationary with respect to the lenticular sheet, said optical scanner including a matrix of light sources and a matrix of light sensors, the operation of which replaces the relative movement between said optical scanner and said lenticular sheet, said light sources emitting light in synchronization with respect to one another, for emitting a single beam that moves over several of the lenticules of the lenticular sheet, said moving beam causing corresponding reflection of light from the lenticules of lenticular sheet, which is sensed by said matrix of light sensors, thereby obtaining the key points.

Conclusion

16. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure and is as follows:

Nims et. al., U.S. Patent Application Publication No. 2002/0167679 A1, teaches scaling and interlacing images; and

Goggins, U.S. Patent No. 7,239,420 B2, teaches producing lenticular images.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC A. RUST whose telephone number is (571)-270-3380. The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benny Tieu can be reached on (571)-272-7490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ERIC A. RUST/

Examiner, Art Unit 2625

08/24/2009

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625